Mathematical Logic — Assignment Four

June 8^{th}, 2017

1. Illustrate an alternative coding of partial recursive functions.
2. State one *natural* incompleteness result.
3. Consider Gödel's Incompleteness Theory: *A first-order theory which (i) is effective, (ii) represents all the partial recursive functions, (iii) is consistent, is necessarily incomplete.* Can you drop any of the assumptions and still get the conclusion? Motivate your answer.

Each question is worth 12 points. The points in all the four assignments will be added together and the result will be divided by 4, and this will be the final result. Remember to mark your answer sheet with your name.